

REMARKS

Claims 19-25, 27-29 and 32-39 were previously pending in the application. By the Amendment, Claims 19, 20, 22-23, 28, 32-34 and 39 are currently amended, Claim 37 has been cancelled, and Claims 21, 24-25, 27, 29, 35-36 and 38 remain unchanged.

The claims stand rejected under the cited prior art of record. Specifically, Claims 32-36 were rejected under 35 USC §102(b) as being anticipated by McManus, US Patent No. 4736971 (McManus '971). Claims 19-29 and 39 were rejected under 35 USC §103(a) as being unpatentable over Lemelson, US Patent No. 3788500 (Lemelson '500) in view of Richardson, US Patent No. 5161934 (Richardson '934). Claims 37-38 were rejected under 35 USC §103(a) as being unpatentable over McManus '971 in view of Lemelson '500.

Applicant respectfully traverses the above rejections and submits to the contrary that the present claimed invention is neither anticipated nor rendered obvious by any of the cited references, taken singly or in any combination.

Independent Claim 19 is directed to an apparatus for at least one of loading and unloading multi-piece goods units into and out of a transport compartment in a loading and unloading direction. Also included are plurality of beam guide members fixed to an overhead support structure and a unitary traveling support beam operatively connected to the beam guide members for reciprocating travel into and out of the transport compartment. At least two gripping units are provided and are operatively mounted to the unitary support beam for movement therewith and disposed in spaced succession therealong for movement into and out of the transport compartment.

According to independent Claim 32, each gripping unit includes two legs which are moveable with respect to one another. The multi-piece goods units are clamped between the two legs and the gripping unit engages the multi-piece goods units. At least two lifting units are provided for lifting the multi-piece goods units in a generally vertical direction perpendicular to the loading and unloading direction for movement of the multi-piece goods units into the transport compartment, release of the goods units and retraction of the traveling support beam from the transport compartment, or the opposite movement for unloading a transport compartment.

The apparatus additionally includes a plurality of beam guide members fixed to an overhead support structure and a unitary traveling support beam operatively connected to the beam guide members and extending in a substantially horizontal direction for reciprocating travel into and out of the transport compartment for depositing the multi-piece good units in the transport compartment or retrieval of multi-piece good units from the transport compartment.

A crossbeam extends in a direction substantially transverse to the support beam, is mounted operatively thereto, and includes a first end and a second end disposed opposite the first end. A first leg is connected to the first end of the crossbeam and extends downwardly in a substantially vertical direction from the crossbeam. A second leg is connected to the second end of the crossbeam and extends downwardly in a substantially vertical direction from the crossbeam, with the first and second legs having respective length dimensions sufficient to extend beyond individual pieces of the multi-piece good units and being movable toward one another to clamp the goods units and away from one another to release the multi-piece goods units. A hydraulic cylinder is connected to the crossbeam and the support beam with the cylinder being movable between a retracted condition

in which the crossbeam is moved toward the support beam to lift the multi-piece good units and an extended condition in which the crossbeam is moved away from the support beam to lower the multi-piece goods units.

Independent Claim 39 is directed to a method for moving multi-piece good units between a loading region and a transport compartment. The method includes the steps of providing a conveying unit including a plurality of beam guide members fixed to an overhead support structure, a unitary traveling support beam operatively connected to the beam guide members and extending in a substantially horizontal direction for reciprocating travel into and out of the transport compartment for depositing the multi-piece goods units in the transport compartment or retrieval of multi-piece goods units from the transport compartment, at least one gripping unit having two legs being movable with respect to one another to engage the multi-piece goods units, and at least one lifting unit connecting the gripping unit to the support beam.

The steps further include positioning the gripping unit adjacent to goods in at least one of a loading region and the transport compartment; engaging the goods units with the gripping unit by moving the legs toward one another to clamp the goods units and apply opposing forces on opposite sides of the goods units; lifting the goods units with the lifting unit; moving the support beam thereby transporting the gripping unit and the multi-piece goods units to the other of the loading region and the transport compartment; lowering the multi-piece goods units back on the base with the lifting unit and, finally, disengaging the multi-piece goods units from the gripping unit by moving the legs away from one another to unclamp the multi-piece goods units.

The cited art of record fails to disclose every element of the claims of the present invention. Further, the cited art of record also fails to teach or suggest the present invention as claimed.

McManus '971 discloses a billet grabber for grabbing one-piece blocks of metal having a movable carriage 12 supported on a pair of overhead rails 13 by powered wheels 11 (Column 2, Line 60-63). The McManus '971 billet grab is for moving move single metal pieces in the form of billets between a smelting process and further treatment of the metal (Column 1, Lines 10-12). As seen in Figure 2, the McManus '971 device uses two abutment members 32, 36 to engage the billet and can move the billet from side to side with respect to the center of the cross member 20.

The McManus '971 device fails on several bases to anticipate the present invention. McManus '971 does not include, teach or suggest a plurality of beam guide members that are operatively connected to a unitary traveling support beam. In addition, the rails 13 of McManus '971 are fixed in position, and there is no teaching or suggestion to do otherwise. Further the McManus '971 rails 13 are incapable of reciprocating travel into and out of a transport compartment for depositing multi-piece goods units in a transport compartment or retrieval of multi-piece units from the transport compartment. The McManus '971 gripping assembly is also incapable of engaging and loading multi-piece goods units and the McManus '971 reference teaches only movement of unitary workpieces. Further, the McManus '971 device is configured for transverse movement of the billet and does not keep the billet centered with respect to the cross member in accordance with the present invention. Therefore, the McManus '971 patent does not anticipate the present invention as recited in Claims 32-36 and it is respectfully requested that the outstanding rejection of Claims 32-36 under 35 USC § 102(b) be withdrawn.

Similarly, and with regard to the rejections under 35 USC§103(a), the Lemelson '500 reference does not disclose, teach or suggest a plurality of beam

guide members fixed to an overhead support structure and a unitary traveling support beam operatively connected to the beam guide members for reciprocatory movement as recited in the present claims. As seen in the Lemelson '500 patent, particularly in Figures 1, 2 and 3, a transport compartment is moved into a telescoping relationship with a fixed beam 14. Further, Figures 5 and 6 illustrate a load being supported on a wheeled support base for movement into a transport unit with no support from above as defined in the claims of the present invention. Therefore, the Lemelson '500 reference is an improper reference and therefore, it cannot be used to support an obviousness rejection of the claims of the present application. Further, based on the foregoing, a combination of Lemelson '500 and Richardson '935 would not result in the present invention. It is therefore respectfully requested that the outstanding rejection of Claims 19-29 and 39 under 35 USC § 103(a) be withdrawn.

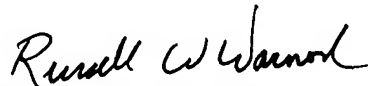
It has been demonstrated from the above that McManus '971 does not include all the elements of Independent Claim 32 and, therefore, cannot be anticipatory of Claim 32 and cannot be combined with any other reference, including Lemelson '500 in order to reject Claim 38 based on obviousness. Further, Dependant Claim 38 depends from Claim 32 which has been demonstrated to be in condition for allowance. It is therefore respectfully asserted that Claim 38 is in condition for allowance.

Based on the above, it has been demonstrated that the claims of the present application are all in condition for allowance and it is respectfully requested that all outstanding rejections of the claims of the present application be withdrawn.

CONCLUSION

In view of the above, entry of the present Amendment and allowance of claims 19-25, 27-29, and 32-36, and 38-39 are respectfully requested. If the Examiner has any questions regarding this amendment, the Examiner is requested to contact the undersigned.

Respectfully submitted,



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